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CHILD'S TOY

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This invention relates to that class of toys which depend for their operation upon the centrifugal force inherent in a gyrating body. Specifically it has reference to a toy which comprises a track to which the child may impart a gyratory or nutating movement to cause a ball to travel therein. Thus the child is called upon to exercise sufficient skill to keep the ball in motion and is thereby entertained.

The invention, in one aspect, has for its principal object to provide a toy as aforesaid which is adapted to be held on the child's head to be manipulated by appropriate gyratory movement thereof. In another aspect the principles of the invention are embodied in a toy to be manipulated with the hand instead of the head.

Other objects and advantages will become apparent from the ensuing description which, taken with the accompanying drawing, discloses preferred modes of carrying the invention into practice.

In this drawing:

FIG. 1 is a perspective view of a toy in accordance with one phase of the invention as it appears in use;

FIG. 2 is a combined front elevation and cross section, the latter being taken substantially along the line 2—2 of FIG. 1;

FIGS. 3 and 4 are perspective views of alternative forms of the invention;

FIG. 5 is a cross section taken on the line 5—5 of FIG. 4; and

FIG. 6 shows, in perspective, still another form in which the invention may be embodied.

Broadly regarded, the invention, in one aspect, comprises a dished body having a re-entrant margin to define a circular track having a concave, radial cross section to guide a ball which is constrained to travel in a circular path in the track by centrifugal force when a gyratory movement is imparted to the body. This latter is supported at its center on a cap or equivalent adjunct adapted to fit snugly on the child's head. Thus, as the child moves his head in a gyratory fashion the ball is constrained to move in the track in a circular path. Unless the necessary impetus is given to the ball the same will return to the center of the body and will remain there. Accordingly the child is obliged to concentrate on the intended objective with appropriate movement of his head thereby developing skill and deriving considerable entertainment therefrom. The body may be rigidly attached to the cap or its equivalent, or a spring may be interposed. In the latter case the body member need be pulsed only at irregular intervals, the resiliency of the spring providing energy storage.

In an alternative aspect the body may be a dish or plate having no special marginal or radial contour and the ball may be tethered by a cord secured to the center of the body. Otherwise the toy is employed as just described.

In another aspect the invention comprehends a hoop having some suitable radial, transverse cross section wherein the ball may travel as urged by centrifugal force as

the hoop is given gyratory movement. The track is secured to a cap or its equivalent by means of a rod extending therebetween. Alternatively the cap may be eliminated and the rod slightly modified for use as a handle.

Turning now to the drawing I have shown, by way of example, a toy embodying the invention comprising a dish-like body **10**, i.e. upwardly concave, having an attaching boss **11** at its center for direct securement to a cap or equivalent device **13** capable of snugly fitting the child's head. The cap **13** may be provided with adjusting means such as a draw-string or a combination of straps for conforming the same to the child's head. Thus the dealer need not stock a large variety of head sizes.

Preferably a somewhat flexible coil spring **16** is interposed between the cap **13** and body **11**. By this expedient the child need not exert himself unnecessarily to maintain the ball in its desired path but may simply impart relatively infrequent impulses to the device to initiate a type of oscillatory-gyratory movement in the spring which, in turn, will maintain movement of the body in the desired pattern. In this case the spring and the body act to store energy in the manner of a flywheel.

The margin **21** of the body **10** is formed reentrantly to define a track which is concave inwardly to restrict the ball **22** to a circular path under the centrifugal force created when gyratory motion is imparted to the body. As long as the child provides the necessary motion to the body which, for convenience, may be termed a wobbling motion, the ball will be caused to spin in the track **21**. If the necessary degree of motion is not imparted to the body the ball will return to an idle position in the depressed center of the body pending repetition of play.

An alternative embodiment is illustrated in FIG. 3 in which the ball **22***a* is caused to travel in a circular path adjacent the rim of a disc-shaped body member **21***a*. In this case, however, the ball is tethered to a central post **31** by a cord **32** and the sharply concave track of FIG. 2 is not essential. In fact, with the embodiment of FIG. 3 the body **21***a* may assume a relatively flat form over its upper surface. In order to avoid entanglement of the cord **32** the post **31** may be made freely rotatable or provided with a swivel for attachment of the cord. Otherwise the construction and function of the toy is similar to that shown in FIGS. 1 and 2.

The arrangement of FIG. 4 comprises a cap **13***b* or similarly functioning support to which is secured a strut **37** bearing an annular track **38** at its other end. In cross section the track **38** is such as to confine the ball **39** in a circular path as a result of substantially gyratory movement imparted thereto by the child.

FIG. 6 illustrates a further embodiment of the basic arrangement of FIG. 4 except that here the strut **37** is a handle **41** whereby the necessary motion is imparted manually.

While I have shown particular embodiments of my invention, it will be understood, of course, that I do not wish to be limited thereto since many modifications may be made and I, therefore, contemplate by the appended claims to cover any such modifications as fall within the true spirit and scope of my invention.

I claim:

1. A child's toy comprising a ball, an upwardly-concave, dish-shaped body symmetrical about its vertical axis having a marginal track portion for constraining the ball to travel in a circular path upon gyratory motion imparted to the body, cap means substantially homologous with the